UNIVERSITÀ DI PAVIA

Anno Accademico 2018/2019

CODING	
Anno immatricolazione	2018/2019
Anno offerta	2018/2019
Normativa	DM270
SSD	ING-INF/05 (SISTEMI DI ELABORAZIONE DELLE INFORMAZIONI)
Dipartimento	DIPARTIMENTO DI SCIENZE ECONOMICHE E AZIENDALI
Corso di studio	INTERNATIONAL BUSINESS AND ENTREPRENEURSHIP - MANAGEMENT INTERNAZIONALE E IMPRENDITORIALITÀ
Curriculum	Digital Management
Anno di corso	1°
Periodo didattico	Secondo Semestre (18/02/2019 - 18/05/2019)
Crediti	6
Ore	44 ore di attività frontale
Lingua insegnamento	English
Tipo esame	SCRITTO E ORALE CONGIUNTI
Docente	LA VOLPE ALESSANDRO - 6 CFU
Prerequisiti	A previous exposure to programming fundamentals is a plus but not mandatory.
Obiettivi formativi	At the end of the course, participants will be able to design and create web-based application using standard and enterprise-grade technologies (Java, HTML, CSS). Participants will also be knowledgeable about the following topics related to Software Production:- Software requirements management and analysis processes - Software Design techniques - Coding and Implementation abilities to create Enteprise-grade Web Applications - Basic Knowledge of Enterprise Software Architectures - Software Production Processes

Programma e contenuti

Syllabus
Lecture 1: Software Production Processes (Cpt. 1, 2, 3) Unified Software Process, UML, Agile Development, Basic Engineering Principles
Lecture 2: Software Requirements Engineering (Cpt. 4, 5, 6, 7) Fundamentals of Requirements Engineering, Use Cases Development, Requirements Analysis, UML Modeling, Data Modeling, Class Modeling. Case Examples and Discussion.
Lecture 3: Principles of Software Design (With OO techniques) (Cpt. 8, 9, 10, 12) Design Concepts: Abstraction, Design Patterns, MVC, Information Hiding, Functional Independence. Architectural Design (Marchioni Cpt. 1-3). Component Design. Java Persistence with JPA (Marchioni Cpt 5). Coding for the Back-End part of the Application.
Lecture 4: User Experience Design (Cpt. 11, 13) Rules for user interface design. Interface issues. HTML/CSS. Designing interfaces with JSF (Java Server Faces) components (Marchioni Cpt 4). Designing interfaces for Mobile systems (Smartphones, Tablets). Coding for the Front-End Part of the Application.
Lecture 5: Software Quality and Testing (Cpt. 14, 15, 16, 17, 18, 19, 20) (Marchioni Cpt 13) Software Quality Assurance techniques. Testing Strategies. Debugging. Test Driven Development.

Metodi didattici

Lectures (hours/year in lecture theatre): 22
Practical class (hours/year in lecture theatre): 0
Practicals / Workshops (hours/year in lecture theatre): 22

Testi di riferimento

Roger S. Pressman. Software Engineering: A practioner's approach. McGraw Hill. 7th Edition.

Oracle. Java EE 6 Tutorial. http://docs.oracle.com/javaee/6/tutorial/doc/docinfo.html.

Micha? ?mil, Micha? Mat?oka, Francesco Marchioni. Java EE 7 Development with WildFly. www.packtpub.com

Modalità verifica apprendimento

Students are required to form small groups and create a concrete web application implementing an assigned case study. Completion of the project will give access to a written exam, with 5 open questions and a short essay (max 1 page) in which the student will have to elaborate on implementation and design challenges tackled during project completion.

Altre informazioni

Owning a modern PC (or Mac) is recommended to practice coding while off-class and to develop the project.

Obiettivi Agenda 2030 per lo sviluppo sostenibile

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